

1 THE STATE OF NEW HAMPSHIRE
2 BEFORE THE
3 NEW HAMPSHIRE
4 SITE EVALUATION COMMITTEE

5
6 DOCKET NO. 2008-
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8 APPLICATION OF GRANITE RELIABLE POWER, LLC
9 FOR CERTIFICATE OF SITE AND FACILITY
10 FOR GRANITE RELIABLE POWER WINDPARK
11 IN COOS COUNTY
12

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14 TESTIMONY OF DANIEL MANDLI
15 ON BEHALF OF
16 GRANITE RELIABLE POWER, LLC

17 July 2008
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20 Qualifications
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22 Q. Please state your name and business address.

23 A. My name is Daniel Mandli. My business address is 8 Railroad Avenue,
24 Essex, Connecticut 06426.

25 Q. Who is your current employer and what position do you hold?

26 A. I am employed by Noble Environmental Power as Senior Vice President,
27 Operations. I am responsible for organizing, recruiting, hiring, training and
28 managing Noble's North American Operations and Maintenance team ("Operations
29 team"). I am also responsible for the formation and management of Noble
30 Environmental Power's 24 hour National Operations Center ("NEP NOC").

31 Q. What are your background and qualifications?

32 A. I was the General Manager of Wind Operations at FPL Energy, Inc. and
33 one-time Director of Service, Installation and Engineering for NEG Micon USA, Inc.

1 NEG Micon USA was a wholly-owned subsidiary of a Danish turbine manufacturing
2 company, NEG Micon a/s, that was purchased by Vestas, a/s, which manufactures,
3 installs and operates in excess of 10,000 turbines worldwide. I have more than 10 years
4 experience in wind plant operations, with emphasis on tracking and increasing overall
5 turbine performance, customer service, process engineering, manufacturing and project
6 management. I also have over 17 years of experience in manufacturing management,
7 with a focus on process optimization. My formal education includes a Bachelor of
8 Science degree in Chemical Engineering from the University of Wisconsin-Madison and
9 a Master's degree in Business Administration with honors, from the University of
10 Illinois-Champaign-Urbana.

11 **Purpose of Testimony and Overview of the Project**

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Q. What is the purpose of your testimony?

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A. The purpose of my testimony is to address Granite Reliable Power, LLC's
("GRP") technical and managerial capability to assure the operation and maintenance of
the Granite Reliable Windpark and the associated interconnection facilities ("the
Project") in continuing compliance with the terms and conditions of its certificate of site
and facility. I am also providing testimony on the Project's impact on air quality and on
some public health and safety issues.

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Q. Are you familiar with the Project that is the subject of this

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Application?

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A. Yes, I am. I have been involved in reviewing plans for the Project and
have prepared an operations plan and budget for the GRP project.

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Q. What will your role be in relation to the Project?

1 A. My role will be to define the GRP operations team, to hire the GRP staff ,
2 to ensure proper technician training, and to implement the operations and maintenance
3 program for Noble at the GRP wind generation facility. Once the Project is operational, I
4 will be responsible for the performance of the operation of the wind facility, including
5 maintenance of the GRP balance of plant, i.e. the roads, collection system, transformers
6 and high voltage switch yard, in other words everything not wind-turbine related.

7 **Managerial and Technical Capability**
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9 **Q. Please describe Noble and GRP's managerial capability to operate**
10 **and maintain a windpower project.**

11 A. Noble Environmental Power is a leading renewable energy company with
12 approximately 300 megawatts of wind energy capacity operating in New York using GE
13 1.5 sle turbines. Noble also has over 4,000 megawatts of windparks under development
14 in several states, including New York, Vermont, New Hampshire, Maine, Wyoming,
15 Texas, Minnesota, North Dakota and Michigan. Noble is majority-owned by affiliates of
16 JP Morgan Partners, LLC. Noble was founded in 2004 in response to growing demand
17 for clean, renewable sources of energy. The Noble Operations team consists of managers
18 that have operated generation plants throughout the United States. We will be
19 responsible for the turbines, turbine SCADA system, the collection and transmission
20 systems, roads and service office for this Project. The Operations team will most likely
21 subcontract our maintenance of the high voltage lines to a local utility that is skilled in
22 working with high voltage collection and transmission systems. The main substation
23 transformer and associated collection system for Noble will be monitored 24 hours per
24 day, 365 days per year, from our NEP NOC in Plattsburgh, New York.

1 **Q. Please describe Noble and GRP’s technical capability to run a**
2 **windpower project.**

3 A. Noble’s Operations team is being built with professionals from the wind
4 power industry. Our current managers have experience operating wind farms for FPL
5 Energy, Inc. and Vestas A/S wind operations team and bring this expertise to Noble.
6 This experience, coupled with the proper hiring and training of site staff positions, will
7 allow Noble to operate the GRP Project safely and efficiently for the planned project life,
8 which is expected to be 25 years

9 **Q. What is Noble’s record with regard to the reliability, operation and**
10 **maintenance of its other wind power projects?**

11 A. Noble’s Operations team prides itself in its ability to focus on constant
12 improvement. We incorporate statistical process control to continually improve the
13 operations of our wind facilities. By monitoring the wind turbines 24 hours per day from
14 an operations center, Noble maximizes the utility of the turbines. All operating
15 parameters are captured by our NEP NOC, which allows us to predictively determine
16 turbine performance.

17 **Q. What technical expertise is required to operate and maintain a wind**
18 **power project?**

19 A. Operating and maintaining a wind power project requires technical
20 expertise in several areas, including expertise in the following:

- 21 1. Wind turbine operations and turbine design
- 22 2. Troubleshooting of wind turbine faults or trips.
- 23 3. Wind turbine preventative maintenance.

- 1 4. Crane rigging and logistics for major component change outs.
- 2 5. High voltage circuit switching and preventative maintenance.
- 3 6. Turbine safe operating procedures.
- 4 7. Preventative maintenance on pad mount transformers, transmission lines, and
- 5 main step up transformers.
- 6 8. Wind turbine SCADA systems.
- 7 9. Predictive maintenance tools.

8 **Q. Does Noble have the requisite technical expertise in the areas that you**
9 **have outlined above?**

10 A. Yes. The Noble Operations team has vast experience in the maintenance
11 and operations of modern wind turbine generation facilities, including all of the areas
12 described above.

13 **Q. Could you please describe the resources and qualifications of the**
14 **personnel available to Noble to operate and maintain its wind power projects ?**

15 A. The Noble Operations team is currently made up of seasoned wind energy
16 leaders that have over 25 years of combined experience in operating wind generation
17 facilities in several states in the United States and in Canada. Our selection of wind
18 turbine technicians is based on hiring candidates with strong mechanical and electronics
19 backgrounds. Once hired, these technicians are sent to the turbine manufacturer's
20 prescribed turbine training

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1 **Q. Do you have oversight of the work at any other wind energy projects?**

2 A. Yes. All of Noble's wind facilities in North America currently fall under
3 the Noble operations team. Currently, we operate the Noble Clinton, Ellenburg, and Bliss
4 Windparks in the state of New York, which together total 282 megawatts. In addition,
5 Noble Operations will be operating another 465 MW of wind turbines by the end of 2008
6 in New York and West Texas.

7 **Q. How does your experience of having oversight of these other projects**
8 **translate to the NH Project?**

9 A. Noble prides itself in providing clean, reliable renewable energy to the
10 highest standards of safety with a strong focus on environmental stewardship. My
11 current responsibilities, through the Noble Operations team, is to ensure that existing
12 projects are maintained and operated in a safe and reliable manner, and thus ensure that
13 they meet all the requirements of regulatory agencies with oversight of the projects, while
14 carrying out the operating instructions received from ISO-NE. These responsibilities
15 provide me with the requisite background and experience to ensure that the GRP project
16 is operated and maintained in safe and reliable manner and in conformance with
17 applicable regulatory requirements. Some of my duties will be as follows: management
18 of the on-site supervisor; budget responsibility; oversight of the maintenance activities;
19 working with turbine supplier on warranty issues; and end-of-life replacements. I will
20 make frequent trips to the project site on a periodic and as-needed basis.

21 **Q. How will GRP staff the wind power Project?**

22 A. There will be an on-site supervisor who will handle day-to-day operations.
23 This person will coordinate with me and my existing staff on any technical issues that

1 may come up, and will also work with me on all maintenance activities and end-of-life
2 replacements. In order to carry out these activities, the on-site supervisor will use a
3 combination of on site technician shared personnel with the NEP NOC and our North
4 East Operations team.

5 **Q. How will you and your staff maintain the Project?**

6 A. In the first three years of operation, we will maintain the Project with a
7 team made up of the turbine supplier's technicians and Noble Wind turbine technicians.
8 This team will be responsible for both scheduled preventative maintenance and
9 unscheduled turbine maintenance. Preventative maintenance will be performed semi-
10 annually on every turbine, which includes inspection, lubrication, fastener re-torquing
11 and oil sampling. Major maintenance such as main component change out will be
12 performed based on turbine inspection and main component condition assessment.

13 **Q. How will you and your staff respond to an emergency at the Project ?**

14 A. If an emergency occurs, the on-site supervisor will contact personnel at the
15 NEP NOC. The NEP NOC will serve as the single point contact for all emergencies.
16 The on-site supervisor will take any action deemed necessary and prudent to isolate any
17 failed piece of equipment to ensure the safety and reliability of the Project After the
18 situation is safe, the on-site supervisor will call me, or my designee, to report the nature
19 of the emergency and we will perform any follow-up action as necessary.

20 **Air Quality**

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22 **Q. Will this Project have any adverse impact on air quality?**

23 A. No. Wind turbines do not have any emissions to the air. Wind turbines
24 are truly a renewable, non polluting source of electrical energy. This Project will have no

1 adverse impact on air quality and will provide an environmental benefit to the state and
2 region because it will add a new source of electric generation without adding air emissions
3 or greenhouse gases.

4 **Public Health and Safety**

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6 **Q. What steps is Noble taking to ensure that the Project will not have an**
7 **unreasonable adverse impact on public health and safety?**

8 A. This Project will not have an unreasonable impact on public safety in so
9 far as ice throw, hazardous materials, and lightning are concerned. Noble takes careful
10 measures to mitigate any safety risks associated with operating wind turbines by
11 appropriately siting turbines away from residences and public roads. Lightning strikes do
12 not pose a public safety risk because the lightning protection system design on modern
13 wind turbine generators dissipates lightning safely to ground, thereby protecting the
14 collection system and nearby structures from damage caused by lightning strikes to the
15 turbine.

16 In terms of hazardous materials, the only hazardous material used in the
17 operations of a windfarm is waste oil, which will be contained per our SPCC (a federally
18 mandated Spill Prevention Containment and Control plan, which all of our operating
19 plants have prepared by a licensed engineering firm) plan and disposed of by a licensed
20 waste hauler. In so far as ice throw is concerned, the blades are designed in a way that
21 minimizes ice throw, and given how far these turbines will be from any residences or
22 areas of general recreational use, this is not an issue. Most ice shedding occurs within
23 one rotor diameter of the turbine, which is less than a 300 foot diameter; our setbacks
24 from roads and residences is greater than this distance, so there is no public health risk.

1 **Q. Does this conclude your testimony?**

2 A. Yes.

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